WHAT IS CLAIMED IS:

1. A communication system, comprising:

a user node;

a corresponding node able to transmit signals to or receive signals from the user node; and

a relay node that is constantly connected to the corresponding node, the relay node being able to transmit signals to or receive signals from the user node,

wherein

the relay node is able to act as proxy for the user node to transmit signals to or receive signals from the corresponding node.

2. The communication system as claim in claim 1, wherein the user node and the relay node act as a virtual node with respect to the corresponding node, the virtual node being identified by a node address of the relay node.

3. The communication system as claim in claim 1, wherein data processed by the relay node

are synchronized with data processed by the user node.

4. The communication system as claim in claim 1, further comprising a link monitoring unit configured to monitor a communication link between the user node and the relay node.

5. The communication system as claim in claim 1, further comprising a node information management unit configured to store information of the user node and the relay node.

6. The communication system as claim in claim 1, wherein

the user node is able to transmit signals to or receive signals from the corresponding node without going through the relay node.

7. A relay node in a communication system including a user node, a corresponding node able to

transmit signals to or receive signals from the user node, and the relay node able to transmit signals to or receive signals from the user node,

the relay node being constantly connected to the corresponding node, and able to act as proxy for the user node to transmit signals to or receive signals from the corresponding node.

8. The relay node as claimed in claim 7, wherein the relay node and the user node act as a virtual node with respect to the corresponding node, the virtual node being identified by a node address of the relay node.

9. The relay node as claimed in claim 7, wherein data processed by the relay node are synchronized with data processed by the user node.

10. The relay node as claimed in claim 7, being able to communicate with a link monitoring unit configured to monitor a communication link between the user node and the relay node.

11. The relay node as claimed in claim 7, further comprising a node information management unit configured to store information of the user node and the relay node.

12. The relay node as claim in claim 7, wherein

the user node transmits signals to or receives signals from the corresponding node without going through the relay node.

13. A user node in a communication system including the user node, a corresponding node able to transmit signals to or receive signals from the user node, and a relay node able to transmit signals to or receive signals from the user node,

the user node being able to be replaced by the relay node which is constantly connected to the corresponding node to transmit signals to or receive signals from the corresponding node.

14. The user node as claimed in claim 13,

wherein the user node and the relay node act as a virtual node with respect to the corresponding node, the virtual node being identified by a node address of the relay node.

15. The user node as claimed in claim 13, wherein data processed by the user node are synchronized with data processed by the relay node.

16. The user node as claimed in claim 13, being able to communicate with a link monitoring unit configured to monitor a communication link between the user node and the relay node.

17. The user node as claimed in claim 13, further comprising a node information management unit configured to store information of the user node and the relay node.

18. The user node as claimed in claim 13, wherein

the user node is able to transmit signals to or receive signals from the corresponding node without going through the relay node.

19. A method of operating a communication system comprising a user node, a corresponding node able to transmit signals to or receive signals from the user node, and a relay node able to transmit signals to or receive signals from the user node, comprising:

a first step of constantly connecting the relay node to the corresponding node; and

a second step of transmitting or receiving signals between the user node and the corresponding node with the relay node acting as proxy for the user node to transmit signals to or receive signals from the corresponding node.

20. The method as claimed in claim 19, wherein

the second step comprises a step of:

making the user node and the relay node act as a virtual node with respect to the corresponding node, and identifying the virtual node by a node address of the relay node.

21. The method as claimed in claim 19, wherein

the second step comprises a step of synchronizing data processed by the relay node with data processed by the user node.

22. The method as claim in claim 19, wherein the second step comprises a step of:

monitoring a communication link between the user node and the relay node.

23. The method as claim in claim 19, wherein the second step comprises a step of:

storing information of the user node and the relay node.

24. The method as claim in claim 19, wherein

the user node is able to transmit signals to or receive signals from the corresponding node without going through the relay node.